

Appl. No.: Not yet assigned
Amdt. dated June 25, 2004
Preliminary Amendment

Amendments to the Drawings:

The attached sheets of drawings includes changes to Figs. 20 and 33. These sheets replace the original sheets including Figures 20 and 33.

Figure 20, left column, in the box entitled, "// INITIALIZATION", line 6, beginning, "n'(i,d)..." is amended from "n'(i,d) : PLANNED NUMBER OF DISTRIBUTIONS" to read " n'(i,d) : IDEAL NUMBER OF ALLOCATIONS".

Figure 33, left column, in the large box entitled, "ON-LINE PROCESS", smaller boxes entitled, "13 VARIOUS CHECKING PROCESSES", "14 DISTRIBUTION LIST GENERATION PROCESS", and "15 USED RULE CHECKING PROCESS" are amended to read, "12 VARIOUS CHECKING PROCESSES", "13 DISTRIBUTION LIST GENERATION PROCESS", and "14 USED RULE CHECKING PROCESS", respectively.

Attachment: Replacement Sheet
Annotated Sheet Showing Changes

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PATENT

REMARKS/ARGUMENTS

The amendments to the specification correct errors in the Japanese specification. These errors are either apparent when read in light of the context of the specification or are merely typographical or clerical in nature. Accordingly, these amendments add no new matter.

Applicants respectfully request entry of this amendment

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

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Attachments
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Handicap calculation \ Updating the number of planned distributions	Real time	Daily	Monthly
Real time	Possible	Possible	Possible
Daily	-	Possible	Possible
Monthly	-	-	Possible

Furthermore, in actual operation, when the timing is such that updating the remaining number of planned distributions and handicap calculation are simultaneous, calculation of the extraction probability need not multiply the handicap and the remaining number of planned distributions, but will result in the same value as using only the handicap calculation.

An embodiment in which updating of the remaining number of planned distributions can be achieved in timing different to that of handicap calculation is the present invention (17).

The present invention (17) is the information distribution system of (16), wherein the means for generating a next time region advertising list can update the number of planned distributions of each advertisement in the advertising list without changing the handicap calculated by the means for calculating handicap.

The present invention (18) is the information distribution system of any one of (14) to (17), wherein the advertisement distribution condition database further stores a category classification for each advertisement, the system further comprising

a means for minimum unit category classification, which finely divides the category classification of all of the advertisements desired to be distributed during the time period into classifiable minimum categories, and wherein

$n0(i,j) = 0$

$n2(i,d) = n2(i,d) + n1(i,d) * (s0(d)/s1(d))$

ii) When there is a slot opening ($s0(d) - s1(d) \leq 0$):

$Ns(i) = Ns(d) - n1(i,d)$

5 $n0(i,d) = \frac{(s0(d) - s1(d))}{s1(d)} * n1(i,d)$

$n2(i,d) = n2(i,d) + n1(i,d)$

3. Slot and remaining number of times updating

<1> For each of $i=0, 1, 2, 3, \dots, CM_SIZE$, when $j=1, 2, 3, \dots, DAYS$, the unit adjustment amount is updated.

10 $n0(i,d) = Ns(i) * day(d)Allday$ //Re-allocation
 $n0(i,d) = n0(i,d) + un(i,d)$ //Add unit amount

where,

$all\ day = \sum_d \sum_i n0(i,d)$

15 $day(d) = \sum_i n0(i,d)$

$i=0, 1, 2, 3, \dots, CM_SIZE; d=1, 2, 3, \dots, DAYS$

20 The "1 Increasing/decreasing adjustment", "2 Opening and overage amount calculation", and "Slot and remaining number of times updating" of "(1) Calculation of ideal number of allocations" in the disallowed time band coefficient calculation flow shown in Fig. 22 are performed by the following processing, respectively.

1. Increasing/decreasing processing

25 <1> For each of $i=1, 2, 3, \dots, CM_SIZE$, when $j=1, 2, 3, \dots, 24$, the unit adjustment amount $n1(i,t)$ is calculated in accordance with the following conditions i) and ii).

i) When time t is a disallowance specification of advertisement i :

30 $n1(i,t) = 0$

ii) For cases other than (i) and in which the advertisement i has a disallowance specification at another time band:

$n1(i,t) = n0(i,t) + n0(i,t) * \sum_j n0(i,j) / \sum_j n0(i,j)$

the advertisement

1. Calculation of initially allocated number of reproductions for the advertisement

$$n_0(i,t) = N(i) \times \log_day(d) / \sum_k \log_day(d)$$

5

$k=1, 2, \dots, \text{DAYS}$

$\log_day(k)$: Number of distribution demands for each time band

$N(i)$: Remaining number of distributions

10 2. For $i=0, 1, 2, \dots, \text{CM_SIZE}$ and $d=1, 2, 3, \dots, \text{DAYS}$:

i) When day d is disallowed for advertisement i :

$$n_1(i,d) = 0$$

ii) For cases other than i) where another day has a disallowance specification:

$$15 \quad n_1(i,d) = n_0(i,d) + n_0(i,d) \times \sum_{j \in T1} n_0(i,j) / \sum_{j \in T2} n_0(i,j)$$

$T1$: Time band set with target specifications for advertisement i

$T2$: Time band set with no target specification for

20 advertisement i

iii) For cases other than i) and ii):

$$n_1(i,d) = 0(i,d)$$

3. Search for optimum value ($n_2(i,d)$)

Mathematical programming is used to determine a combination of $n_2(i,d)$ that minimizes the target function Z shown below:

25

Target function:

$$Z = \sum_{i,d} \left\{ K(i,d) \times \left| \frac{n_1(i,d) - n_2(i,d)}{n_1(i,d)} \right| \right\} \rightarrow \min$$

30

$i=1, 2, \dots, \text{CM_SIZE}$ and $d=1, 2, 3, \dots, \text{DAYS}$

$K(i,j) = 1$

Target function:

$$Z = \sum_{i,t} \left\{ K(i,t) \times \left| \frac{n1(i,t) - n2(i,t)}{n1(i,t)} \right| \right\} \rightarrow \min$$

5

$i=1,2,\dots,CM_SIZE; t=1,2,3,\dots,24$

$K(i,j)=1$

Restriction conditions:

$\sum_t n2(i,t) = \sum_t n0(i,t)$

10

t

$\sum_i n2(i,t) = \sum_i n0(i,t)$

$i=1,2,3,\dots,CM_SIZE; t=1,2,3,\dots,24$

i

$n2(i,t)=0$ (if $a(i,t)=0$) //Disallowance time band variable ignored

15

4. Disallowance time band coefficient (C) calculation

$w(i,t) = n2(i,t)/N(i)$

$C(i,t) = w(i,t)/(A(i,d) * B(i,d))$

Target Time Band Coefficient Calculation

20

(Pre-conditions)

CM_SIZE: Number of advertisements

$a(i,t)$: Increase/decrease specification information

$n0(i,t)$: Initially allocated number of reproductions for

the advertisement

25

1. Calculation of initially allocated number of reproductions for the advertisement

$n0(i,t) = A(i,d) * B(i,d) * \cancel{B(i,d)} * C(i,t) * N(i)$

$A(i,d)$: Disallowance date coefficient

$B(i,d)$: Target date coefficient

30

$C(i,t)$: Disallowance time band coefficient

$N(i)$: Remaining number of distributions

2. Ideal value ($n1(i,t)$) determination

For $i=0, 1, 2, 3, \dots, CM_SIZE$ and $t=1, 2, 3, \dots, 24$:

i). When time t is a target time band for advertisement i :

35

$n1(i,t) = n0(i,t) + u(i,t)$

multiplying the extraction probability of each advertisement by a corresponding correction coefficient and updating the extraction probability of each advertisement in the selected next time region advertising list so as to reflect the results of the extraction in the next extraction probability.

54. The information distribution method of claim 53, wherein the step of generating a next time region advertising list can update the number of planned distributions of each advertisement in the advertising list without changing the handicap calculated by the step of calculating handicap.

55. The information distribution method of any one of claims 51 to 54, comprising the steps of:

storing a category classification for each advertisement, finely dividing the category classification of all of the advertisements desired to be distributed during the time period into classifiable minimum categories, and

assigning the stored increase or decrease specifications to the corresponding minimum unit categories and storing the specifications again.

56. The information distribution method of any one of claims 51 to 55, wherein

the step of calculating the number of planned distributions uniformly and flexibly adjusts the initially allocated number of reproductions for the advertisement with the target specification for the specified category using category weight, so as to increase or decrease in accordance with the target specification, relative to the number of reproductions for the advertisement for categories without target specification for the advertisement, and while maintaining the ratio of the number of reproductions for the advertisement for each category of each advertisement after the flexible adjustment to the planned number of reproductions for the advertisement for each advertisement, calculates the category weight for the

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FIG. 20

(1) CALCULATION OF IDEAL NUMBER OF ALLOCATIONS

CALCULATION FLOW OF DISALLOWED DATA COEFFICIENT

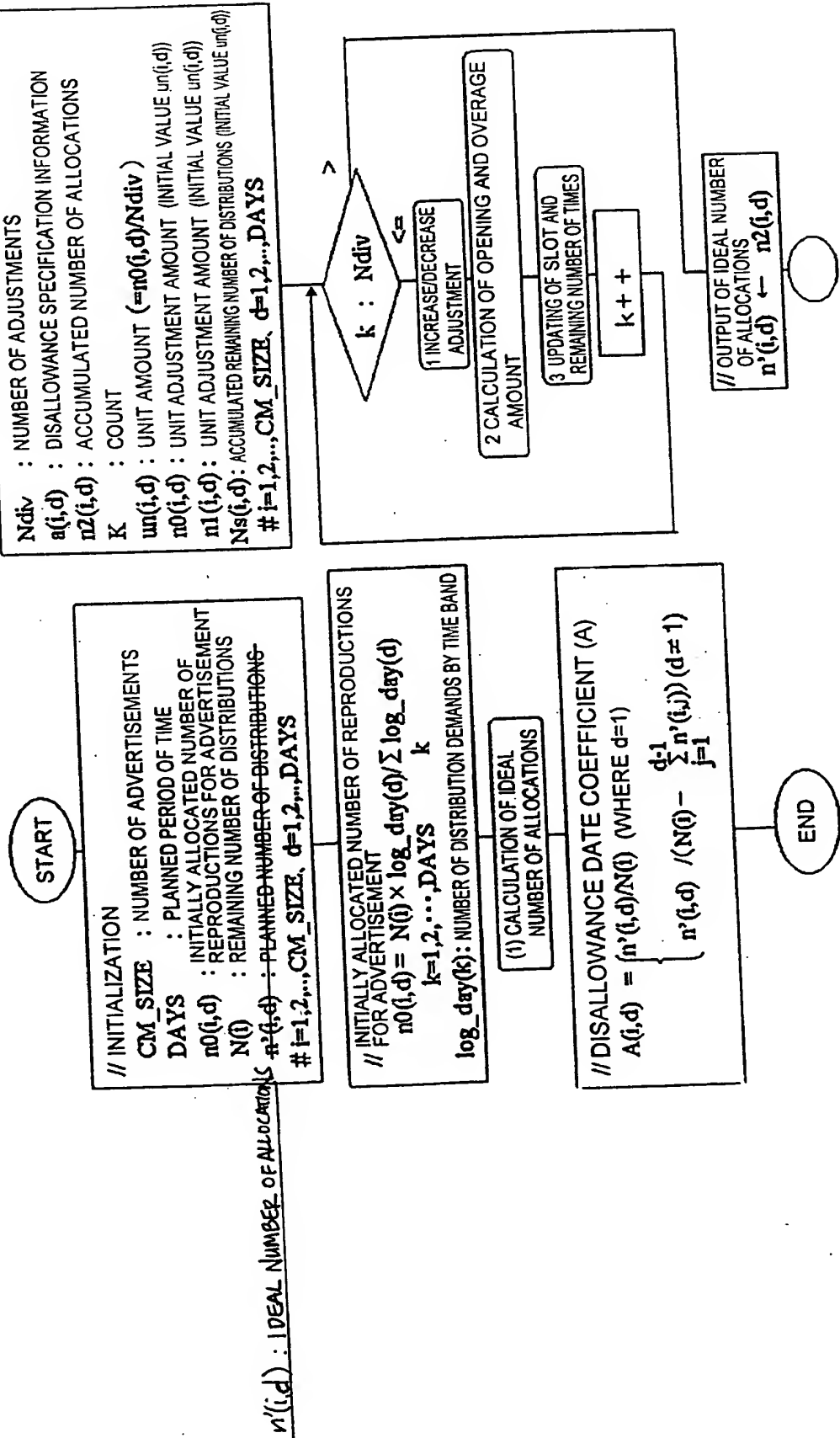


FIG. 33

